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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/052,696 | 01/18/2002 | Douglas W. Johnson | 10290US01 | 3813 |

7590 06/18/2004
Attention: Eric D. Levinson
Imation Corp.
Legal Affairs
P.O. Box 64898
St. Paul, MN 55164-0898

EXAMINER

OLSON, JASON C

ART UNIT PAPER NUMBER

2651

DATE MAILED: 06/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/052,696

Applicant(s)

JOHNSON, DOUGLAS W.

Examiner

Jason C Olson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 29-34 is/are allowed.
- 6) ☒ Claim(s) 1-9, 11, 12, 16, 22-24, 26 and 27 is/are rejected.
- 7) ☒ Claim(s) 10, 13-15, 17-21, 25 and 28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 18 recites the limitation "servo read head" in line 7. There is insufficient antecedent basis for this limitation in the claim. The Examiner suggests that claims 17-21 be dependent from claim 16 instead of claim 13. Appropriate correction is required.

Claims 5, 16, and 29 recite the term "essentially", which is a relative term and could render the claims indefinite. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 8-9, 11-12, 16, 22-23, and 26-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Tran et al. (U.S. 6,134,070).

Regarding claim 1, Tran et al. teaches a tape (or linear recording medium, see figure 13, item 160) including a plurality of servo bands containing parallel servo transitions (items T1, T2, and T3) (see col. 16, ln. 27-59). Illustrated in figure 6, items Ts and Ta; it can be seen that the distance between a first servo transition (i.e. T1) and the beginning of the next parallel servo transition (i.e. T2) is different (or modulated) for the different servo transitions (T1, T2, and T3)

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as pertaining to their location on the tape (or a function of location) relative to the servo transitions that they are adjacent to (see col. 13, ln. 54-col. 13, ln. 41).

Regarding claims 2-4, Tran et al. depicts in figure 6, items T1, T2, and T3, that the adjacent parallel servo transitions being immediately adjacent and that the recording medium is a magnetic tape recording medium (see col. 7, ln. 50-60).

Regarding claims 5-6: Claims 5-6 have limitations similar to those treated in the above rejection(s), and are met by the references as discussed above. Claim 5 however, also recites the following limitations as taught by Tran et al.: a head assembly, including one or more servo read elements to use in reading servo tracks to generate a position error signal (PES), which represents a position of the servo read element or elements relative to a proximate servo track in the servo band (see col. 7, ln. 61-col. 8, ln. 35), where the parallel servo transitions in the servo band are written at a constant servo sampling period (T_s) so that the system expects no modulated distances between parallel servo transitions (see col. 10, ln. 53-col. 11, ln. 43).

Regarding claims 8-9, 16, and 22-23: Method claims 8-9, 16, and 22-23 are drawn to the method of using the corresponding apparatus claimed in claims 1-6. Therefore method claims 8-9, 16, and 22-23 correspond to apparatus claims 1-6 and are rejected for the same reasons of anticipation as used above.

Regarding claims 11-12 and 26-27, Tran et al. further teaches moving (or adjusting) the tape relative to the servo head (see col. 15, ln. 36-62) and positioning (or adjusting) the servo head relative to the tape (see col. 7, ln. 50-col. 8, ln. 43).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molstad et al. (U.S. 6,542,325) and in view of Tran et al.

Regarding claim 7, Tran et al. teaches all the limitations of claim 5, but fails to mention a constant speed of the linear recording medium relative to the servo read head, however, Molstad et al. is relied upon to teach a constant speed of the servo read head, relative to the servo tracks (see col. 12, ln. 41-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Tran et al. invention with the invention as taught by Molstad et al. The rationale is as follows: one of ordinary skill in the art would have been motivated in a constant servo period system to maintain a constant speed between the tape medium and the servo head to obtain a accurate position error signal.

Regarding claim 24: Tran et al. teaches all the limitations of claim 22; furthermore, method claim 24 is drawn to the method of using the corresponding apparatus claimed in claim 7. Therefore method claim 24 corresponds to apparatus claim 7 and is rejected for the same reasons of obviousness as used above.

Allowable Subject Matter

Claims 10, 13-15, 17-21, 25, and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 29-34 are allowed. The prior art fails to teach alone or in combination the method of evaluating performance of a linear recording drive by providing a medium having a series of parallel servo transitions having distances between adjacent parallel servo transitions which have been modulated as a function of the location of the transitions on the medium; using the drive to read a position error signal at each transverse location on the medium; and comparing the position error signal to an expected value.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chliwnyj et al. (U.S. 5,872,672) is cited for monitoring and analyzing tape servo performance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason C Olson whose telephone number is 703.305.8325. The examiner can normally be reached on Monday thru Thursday 7:30-5:30; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R Hudspeth can be reached on (703)308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JCO
June 9, 2004




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